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Waterbody No. WA-07-1160

MEMORANDUM

January 14, 1976

To: John Glynn

From: Darrel Anderson

Subject: Monroe Reformatory Sewage Lagoons

Date: January 8, 1976

On November 18, 1975, I conducted an efficiency survey at the Washington State Monroe Reformatory sewage lagoons. Overall, housekeeping is very good and lagoon dikes in good condition. Five day BOD is 50%, COD is 55% reduction. Fecal coliform count is no problem but Cl_2 injection needs to be timed according to flow. Also a flow meter needs to be repaired, a totalizer is the only reading available at present.

AWM:ee

STP Survey Report Form

Efficiency Study

City Monroe Reformatory Plant Type Anaerobic - Aerobic Oxidation pond Pop. Served 1000+ Design Capacity ____

Receiving Water Skykomish R. Perennial X Intermittent ____

Date 11 Nov. 75 Survey Period 083-1630 Survey Personnel Darrel Anderson

Comp. Sampling Frequency 1 hr. Sampling Alequot 1000 ml

Weather Conditions (24 hr) Fog-morning Cold, clear Are facilities provided for complete by-pass of raw sewage? ____ Yes X No/Frequency of bypass None

Reason for bypass ____ --- Is bypass chlorinated? --- Yes ---- No

Was DOE Notified? --- Discharge - Intermittent ____ Continuous X

Plant Operation

Total flow .146 MGD How measured Totalizer on effluent

Maximum flow --- Time of Max. ----

Minimum flow --- Time of Min. ---

Pre Cl_2 None #/day Post Cl_2 7-8 #/day

Field Results

Determinations	Influent Max.	Influent Min.	Influent Mean	Influent Median	Effluent Max.	Effluent Min.	Effluent Mean	Effluent Median
Temp °C	28.0	20.1		24.0	8.0	5.0		7.0
pH (Units)	10.6	5.8		8.8	6.9	6.6		6.8
Conductivity ($\mu mhos/cm^2$)	---	---		---	---	---		---
Settleable Solids (mls/l)	10.0	4.0	7.1	8.0	Trace		---	---

Laboratory Results on Composites

	Influent	Effluent	% Reduction	lbs/day
Laboratory No.	75-5327	75-5328		
5-Day BOD ppm	260	110	58	133.94
COD ppm	440	200	55	
T.S. ppm	552	260	53	
T.N.V.S. ppm	203	117	43	
T.S.S. ppm	123	48	61	58.44
N.V.S.S. ppm	27	9	67	
pH (Units)	9.0	7.0		
Conductivity ($\mu mhos/cm^2$)	360	380		
Turbidity (JTU's)	72	51		

Laboratory Bacteriological Results

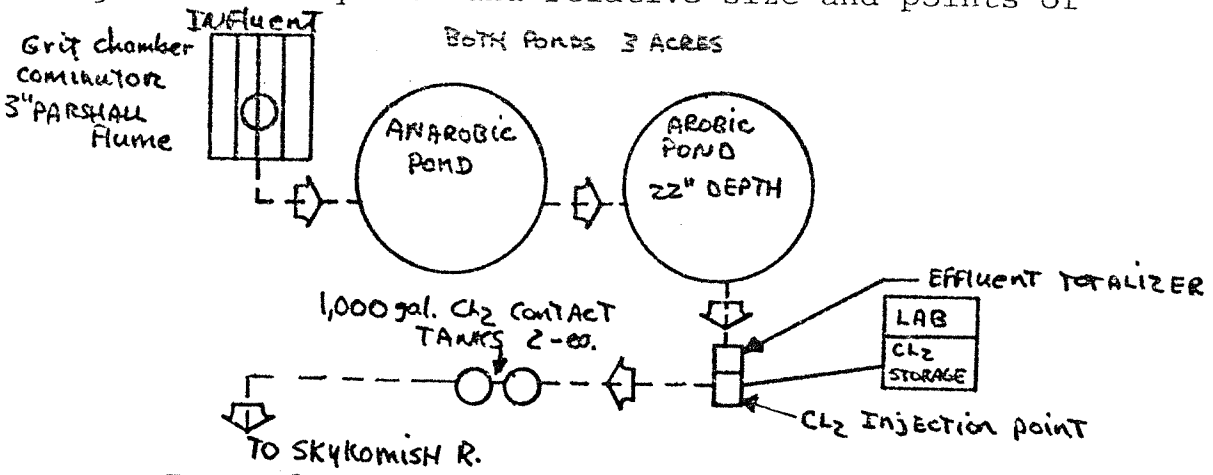
Lab No.	Sampling Time	Colonies/100 ml (MF) Total Coliform	Fecal Coliform	Fecal Strep	Cl_2 Residual
75-162	0845		<100		1.0
158	1010		<100		1.0
163	1140		<100		1.0
161	1320		200 (non-ideal)		1.0
164	1535		100 (non-ideal)		1.0

Additional Laboratory Results

NO_3-N ppm -	0.01
NO_2-N ppm -	ND
NH_3-N ppm -	11
T. Kjeldahl-N ppm -	4
O-PO_4-P ppm -	3.0
T-PO_4-P ppm -	4.5

Operator's Name Wilbur Weir Phone No. _____

Furnish a flow diagram with sequence and relative size and points of chlorination.



Type of Collection System

X Combined __ Separate __ Both

Estimate flow contributed by surface or ground water (infiltration)

_____ MGD

Plant Loading Information

Annual average daily flow rate(mgd)

Dry .20 MGD

Wet _____

Peak flow rate(mgd)

Dry _____

Wet _____

COMMENTS: Retention time 17 days average

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

WATER QUALITY LABORATORY

ORIGINAL TO: AWM
COPIES TO:
LAB FILES

DATA SUMMARY

Source Monroe Reformatory STP Collected By A. Moore

Date Collected 11-18-75

Log Number: 75- 5327 5328

Station:	INF	EFF
pH	9.0	7.0
Turbidity (JTU)	72.	51.
Conductivity (umhos/cm)@25°C	360	380
COD	440.	200.
BOD (5 day)	260.	110.
Total Coliform (Col./100ml)		
Fecal Coliform (Col./100ml)		
NO3-N (Filtered)		0.01
NO2-N (Filtered)		ND
NH3-N (Unfiltered)		11.
T. Kjeldahl-N (Unfiltered)		4.
O-PO4-P (Filtered)		3.0
Total Phos.-P (Unfiltered)		4.5
Total Solids	552	260
Total Non Vol. Solids	203	117
Total Suspended Solids	123	48
Total Sus. Non Vol. Solids	27	9

Note: All results are in PPM unless otherwise specified. ND is "None Detected"

Summary By Stephen D. Bell Date 11-26-75